

CONTROLLED UNCLASSIFIED INFORMATION

Sole Source (Including Brand Name) Justification - Simplified Procedures for Certain Commercial Items

NOTE: If a Justification was approved for the preceding acquisition, a copy of the approved Justification for the predecessor action must be included in the staff package for approval of the instant Justification. This applies to Justification staff packages that are submitted for review and approval at a level above the contracting officer. The predecessor Justification will be used as a reference document by the approving official.

Is this a new or amended J&A Document? [X] New [] Amended (Prior to Award Only!)

Is this a Bridge Action as defined in the AF Bridge Action Reduction Plan? [] Yes [X] No

Funding level for this acquisition: [] >SAT and <= \$750K [X] > \$750K and <= \$15M

Contracting Activity: AFTC/PZZD

Purchase Request / Local ID Number: F150AF3025A001, F150AF3032A001, F150AF3032A003

Program / Project (and PE, if applicable): High Accuracy GPS/IMU Based Time Space Positioning Information (TSPI) - Common Range Integrated Instrumentation System (CRIIS) Program

Program Type (PEO or Other Contracting): Other Contracting

Authority: [X] AFFARS 5313.501 - 10 U.S.C. 2302b, Implementation of Simplified Acquisition Procedures (41 U.S.C. 1901) [] AFFARS 5313.501 - 10 U.S.C. 2304a, Special Emergency Procurement Authority (41 U.S.C. 1903)

Estimated Contract Cost (including options): [REDACTED] Justification Type: [] Class [X] Individual

COORDINATION (AFFARS 5306.304(a))

Table with 2 columns: Date (21 Feb 2023) and Signature (Redacted)

Table with 2 columns: Date (22 Feb 2023) and Signature (Redacted). Contracting Officer: Christina Day, NH-III

APPROVAL (AFFARS 5306.304(a))

Table with 2 columns: Date (23 Feb 2023) and Signature (Redacted)

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I. Contracting Activity.

The contracting organization that is responsible for the proposed contract action is the Air Force Test Center (AFTC), Directorate of Contracting, Enterprise Acquisition Division (PZZD), 5 South Wolfe Avenue, Edwards AFB CA 93524-1185. The contracting officer for this acquisition is Christina Day. The purchase request numbers are F1S0AF3025A001, F1S0AF3032A001, and F1S0AF3032A003. This is a Sole Source (Including Brand Name) Justification.

II. Nature and/or description of the action being processed.

The new CRIIS and legacy ARDS TSPI systems, developed by the Time Space Position Information (TSPI) department of the Air Force Test Center (AFTC) Range Division, provides a modular platform for the use of a variety of Global Positioning System (GPS) and Inertial Measurement Unit (IMU) sensors. Both the CRIIS and ARDS systems currently integrate the Honeywell Ring-Laser-Gyro HG9900 to produce a high accuracy GPS/IMU blended solution in post-flight.

Current Quantity Requirement:

HG9900 IMU (7 Each) - (3ea) HG9900E1A-2020 and (4ea)HG9900C1A-2020. The two part numbers represent the same accuracy requirements with different isolation needs due to unique requirements of the aircraft they are mounted in.

The proposed action will result in a Brand Name new Firm-Fixed Price (FFP) contract; the proposed brand name is: Honeywell IMU HG9900 using distributor LKD Aerospace as the source.

III. Description of supplies/services required to meet agency needs.

This requirement is mission critical, and will support existing and future Time Space Positioning Information (TSPI) high accuracy sensor data that supports flight test missions at the 412th and 96th Test Wing. This capability is critical to support the new Common Range Integrated Instrumentation System (CRIIS) that is currently being integrated at both Edwards and Eglin AFB as well as a support legacy TSPI systems that are now being upgraded.

This contract action addresses the existing capability gap in the current TSPI systems available for trajectory analysis. To address this need, the 412th Range Squadron and 96th Range Control Squadron are jointly leading the development of a next-generation high accuracy TSPI data processing. The IMU sensors is one part of a tested solution.

This system will provide the ability to flexibly and accurately incorporate a wide variety of sensors with varying performance. General system requirements include:

The system will also support a wide-range of legacy and future sensors including inertial measurements units (IMU), global navigation satellite system (GNSS) receivers, ground optical and radar tracking systems. In addition, it supports incorporation of a statistical dead reckoning module designed to support various classes (and types) of vehicles. The models will be equipped with tuning parameters to allow the analyst to customize the performance to suit a range of vehicle types.

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IV. Statutory authority permitting other than full and open competition.

The statutory authority permitting this action is 10 USC 2304(c)(1) which specifies that, “the property or services needed by the agency are available from only one responsible source or only from a limited number of responsible sources and no other type of property or service will satisfy the needs of the agency” as implemented by Federal Acquisition Regulation (FAR) Part 6.302- 1(a)(2)(iii)(A).

V. Demonstration that the contractor's unique qualifications or nature of the acquisition requires the use of the authority cited above (applicability of authority).

The TSPI group currently uses the Honeywell HG9900 IMU Navigational grade IMU with a drift rate of 0.8 nm/hr for the CRIIS GRITS user High Accuracy TSPI needs. The HG9900 has an operating range of $\pm 20g$. The HG9900 outputs two (2) message types: Message 3 and Message 4. Message 3 contains the TSPI and BIT information and is output at 300 Hz continuously. Message 4 contains Unit Information such as Serial number, BIT and temperature. Message 4 is output at power up 10 times and then is suppressed. All data is output in SDLC format with a fixed address field.

VI. Description of efforts made to ensure that offers are solicited from as many potential sources as practicable.

Market Research was performed by consulting knowledgeable individuals, both in government and industry, regarding the capabilities to meet the requirements. Research was conducted in the Institute of Navigation (ION) and at the RCC Electronic Trajectory Measurements Group (ETMG) Communities.

The buyer also checked the required sources of supply IAW FAR 8.002 and confirmed with Honeywell that LKD Aerospace is the only distributor for this IMU equipment.

VII. Determination by the Contracting Officer that the anticipated cost to the Government will be fair and reasonable.

The anticipated costs will be determined fair and reasonable based on comparison with open market prices for same or similar items or services and historical pricing IAW FAR 13.106-3. The program manager will provide a technical evaluation analyzing the proposed information.

VIII. Description of the market research conducted and the results, or a statement of the reasons market research was not conducted.

The 412 TENG performed market research and found that the commercial HG9900 IMU units used in the aircraft TSPI systems are only available from one brand name Honeywell who utilizes LKD Aerospace as its distributor. The legacy TSPI systems on the aircraft are designed to operate with the unique designs of the HG9900. Additionally, the MOSES Post Mission Processing (PMP) tool can only process data from TSPI systems using the Honeywell IMU units. Finally, the CRIIS TSPI systems currently being delivered to Edwards and Eglin Air Force Bases only operate using the Honeywell IMU units. The CRIIS TSPI system was developed by TRMC and is mandated by the Air Force as the next generation enterprise TSPI solution.

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IX. Any other facts supporting the use of Other Than Full and Open Competition.

The brand name Honeywell items for High Accuracy is the HG9900 IMU and is currently being used on existing and legacy aircraft at Edwards AFB and Eglin AFB. These items are form fitted and are currently mounted to an accuracy of <0.03 degrees on the existing aircraft.

The 420th Flight Test Squadron had purchased (10ea) of the HG9900's in FY18 to support high accuracy Flight Test activities and now the program has asked for (7ea) more to support the Operational Systems being used as part of Operational Test and Evaluation. It is critical to have the same hardware accuracy used for both Development Testing and Operational Testing to minimize potential confusion that could occur by utilizing different systems and comparing data. It is possible to get two different answers if using different sets of hardware, due to installation differences, bore sight accuracies, etc. which could then drive us to re-fly data missions to prove which was correct. Maintaining one type of hardware will prevent this, as all will be installed utilizing the same processes, procedures, and all will have the same accuracies.

X. List of any sources that expressed, in writing, an interest in the acquisition.

None. There is only one distributor of the Honeywell IMU required.

XI. A statement of the actions, if any, the agency may take to remove or overcome any barriers to competition before making subsequent acquisitions for the supplies or services required.

In addition to participating at ION and RCC ETMG described in Section VI, market research will continue throughout the contract period by attending trade shows, conferences and technical symposiums and if full-and-open competition becomes available and it is determined to be beneficial, the government will compete any future acquisition of this nature.

XII. Certification by the Contracting Officer.

As evidenced by my signature above, I have determined this document to be both accurate and complete to the best of my knowledge and belief.

XIII. Certification by the technical/requirements personnel.

As evidenced by my signature above, I certify that any supporting data contained herein, which is my responsibility, is both accurate and complete.